DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-023944
Date Inspected: 24-May-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	See Report Below			**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
				Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girders & Tower

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the Complete Joint Penetration (CJP) groove welds of the East and West Orthotropic Box Girders (OBG's) and the Tower. The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specifications (WPS's).

A). Lifting Lug Holes

The QAI observed the CJP welding of the lifting lug holes identified as WN: 8E-PP68-E4, W1 through W4 and WN: 8E-PP76-E3, W1. The welding was performed by Jason Collins ID-8128 and Jorge Lopez ID-6149 utilizing the WPS identified as ABF-WPS-D15-1050A-CU, Rev.0. and 1110A, Rev. 1. The QAI also observed the QC inspector perform the visual inspection and verify the welding parameters during the production welding. The inspection performed by Fred Von Hoff appeared to comply with the contract specifications.

Later in the shift the QAI performed a visual weld inspection of the lifting lug holes identified as 8W-PP68-W4-W1 through W4 and 9W-PP80-W3, W1 through W4. The inspection of the CJP welds was performed to verify the weld and QC inspection meet the requirements of the contract documents. At the conclusion of the inspection QA concurs with QC assessment. This verification was performed at the request of the QC inspector John Pagliero.

B). Pipe Welds

The QAI observed the CJP welding of the pipe welds identified as 3/DW2.5/TD 42-SW and 2/DW2.5/TD 42-SW. The welding was performed by FW Spencer personnel Rick Kiikvee utilizing the WPS identified as 1-12-1. The QAI observed the QC inspector Steve Jensen perform the in process welding and verify the parameters utilizing the the WPS. Later in the shift, at the request of the QC inspector, the QAI performed a visual inspection to verify the weld and QC inspection meet the requirements of the contract specifications. QAI noted no issues and concurs with QC assessment.

C). Bike Path

The QAI observed the Magnetic Particle Testing (MPT) on the cantilever beam supports performed by the QC inspector Jesse Cayabyab. The testing was performed on the areas where the threaded studs were removed and ground flush with the base material. These areas were tested 100% to verify that the base material and testing by QC meet the requirements of the contract documents. The areas between panel points 8.5 and 31 were completed and appeared to comply and satisfy the contract specifications.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the flat, overhead and 5G fixed position utilizing the E7018-H4R low hydrogen. The 2.4 mm, 3.2 mm and 4.0 mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The WPS's were also utilized by the QC inspector's as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs on page 3 of this report illustrate some of the related work observed during this shift.

WELDING INSPECTION REPORT

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Summary of Conversations:

There were general conversations with Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer